

REMARKS

The Applicant wishes to thank the Examiner for the opportunity to further discuss and clarify the issues in this application.

Background

Dishwasher gaskets are a particular problem in the industry. For practical reasons dishwasher doors normally open forward, creating an opening that would naturally leak without sealing gaskets. This differs from top loading washing machines which have no gaskets.

Frontloading washing machines do have a gasket, but unlike a dishwasher, the size of the frontloading door in a washing machine can be relatively small (there are no racks) limiting the total length of the gasket and thus the amount of compressive force necessary to close the door.

Initially, the dishwasher industry used leverage in the latch mechanisms to help compress a relatively stiff gasket around the dishwasher door. These latches were inconvenient to the consumer. For this reason, the dishwasher industry has moved to highly compliant (flexible) gaskets using new elastomer materials. These gaskets allow closure of the door with a light pressure by the user without a levered latch.

Unfortunately, as these gaskets age they stiffen and shrink creating leakage problems.

The present invention takes a wholly different approach to this problem of gaskets providing a compact motorized door closure system that accomodates both stiffer gaskets and gasket aging without difficult to use lever systems. Creation of a practical automatic door closure system required a number of innovations including a timing control system, force sensors, and compact mechanisms that would work with motors of reasonable size. This approach to the problem of dishwasher gasket sealing was unrecognized in the industry at this time and a practical design for a motorized door closure system for dishwashers was unknown.

Claim Rejections-35 USC §103

Claims 1-2, 4, 6-9, 12-13, 15-16, 19-21, and 23 have been rejected under 35 USC §103 as being unpatentable over Buser in light of Ellingson. It is respectfully submitted,

that the references cited, even in combination, fail to fairly teach a number of elements of the claims as currently amended.

Claim 1

It is believed that even in combination, Buser and Ellingson fail to teach "at least one switch providing a signal confirming engagement of the electric actuator and door". The Examiner appears, in this case, to be relying on a switch in Ellingson indicating whether a door is closed. But door closure is not the same as engagement of the electric actuator and the door. This is because the electric actuator moves and thus can be and is engaged with the door when the door is both in the open and close position (and conversely can be disengaged with the door when the doors in the open and closed position).

It is believed that Buser and Ellingson also fail to teach "a timer/controller generating an electric signal indicating a time for sealing the door for washing." The Examiner appears to be relying, in this case, on the teachings of Buser of a timer for releasing the door at the end of the rinsing cycle. But a timer providing a signal for releasing the door is clearly different from a timer that produces a signal for sealing a door before the rinse cycle. There is no suggestion that Ellingson teaches such a timer.

It is believed that even in combination, Buser and Ellingson also fail to teach a force sensor and in particular "a force sensor sensing a pre-determined force on the electric actuator resisting closure of the door by the electric actuator caused by an obstruction between the door and the washing chamber to controllably stop closure of the door before the seal position". The Examiner suggests the existence of a "force limiter" in Buser. This term is not found in Buser nor is any specific citation in Buser offered. It is believed a prima facie case for this claim element has not been made.

Claim 12

Even in combination, Buser and Ellingson fail to teach " a switch providing a signal confirming engagement of the latch portions". As before, the Examiner appears to be relying on a switch that detects closure of a door, something that is distinct from a switch that detects engagement of latch portions.

It is believed that Buser and Ellingson also fail to teach a " controller allowing

initiation of a wash cycle only after generation of the closure signal and receipt of the signal from the switch" The Examiner is encouraged to reconsider his position with respect to the refusal to consider functional language defining the operation of the controller. The Applicant notes that functional language is permissible under the rules of the MPEP.

2173.05(g) Functional Limitations [R-3]

A functional limitation is an attempt to define something by what it does, rather than by what it is (e.g., as evidenced by its specific structure or specific ingredients). There is nothing inherently wrong with defining some part of an invention in functional terms. Functional language does not, in and of itself, render a claim improper. In re Swinehart, 439 F.2d 210, 169 USPQ 226 (CCPA 1971). MPEP 2173.05(g)

While Applicant agrees that functional language should be avoided if possible, in this case the description of the operation of the controller and the timer are believed to provide a reasonable balance between claim scope and clarity. This approach for programmable devices follows the rules and practice of the Patent Office as well as Supreme Court precedent and Federal Court of Appeals precedent and is the subject of a single isolated case.

Claim 20

It is believed, that even in combination Buser and Ellingson fail to teach:

a timer/controller controlling the washing of dishes within the washing chamber and providing a first signal during a washing period and a separate drying signal during a drying period different from the washing period during which the dishes dry after washing; and

an electric door actuator communicating with the timer/controller to respond to a the first signal from the timer/controller to automatically close the door at the washing period to seal water within the washing chamber and to automatically open the door for venting of water vapor from within the washing chamber during the drying period in response to the drying signal.

Again, the objection appears to be that of using functional language to describe the timer/control rather than a finding of these elements in the prior art. It is believed that this functional language is both appropriate and widely accepted under the current rules of the US Patent Office, however as this appears to be a strictly formal objection, , Applicant offers a new claim 28 casting these limitations in method form which would be

acceptable to the Applicant instead of the current apparatus claim 20.

Conclusion

The Examiner has an important role that goes beyond that of a simple advocate for particular outcome. During prosecution, the Examiner operates as both as an advocate and as judge. It is in this latter capacity that the Examiner is entrusted to undertake the task of fairly and impartially considering the arguments both against and for patentability.

The Applicant encourages the Examiner to consider whether the prior art and the facts gleaned from the prior, from a perspective before the present invention, fairly teach the present invention's solution to the problems of dishwasher gasket compliance. Applicant believes that an impartial reading of the prior art indicates that there was no recognition of this approach to the problems of sealing dishwashers in a way that managed the competing concerns of consumer convenience and reliable gasket sealing. Nor are the necessary features required to implement a practical such system taught or suggested in the prior art.

For the reasons provided above, and in the previous responses, it is believed that claims 1, 12, and 20 and 28 are allowable and thus that claims 1-2, 4-10, 12-13, 15, 18-21, and 23-28 are now in condition for allowance and allowance is respectfully requested..

Very truly yours,

KENYON A. HAPKE

By: 

Keith M. Baxter
Reg. No. 31,233
Attorney for Applicant
Boyle Fredrickson, S.C.
840 N. Plankinton Avenue
Milwaukee, WI 53203